



## Chapter

# 8

## Yard Waste

### *Yard Waste - Current City of Falls Church Management System, Anticipated Gaps in Waste Management, and SWMP Actions*

**This chapter presents the process used by the City to evaluate the current SWM system, project the future waste stream, identify anticipated gaps in waste management, and select SWMP actions for yard waste.**

This chapter presents the evaluation of the City's current and projected solid waste management (SWM) activities for yard waste, organized by the SWM hierarchy. It uses the hierarchy as the framework for determining how to bridge the gaps between the current SWM activities and the strategies needed to manage the City's yard waste in the future. The chapter then presents the City's SWMP actions for yard waste over the next 20 years to address those gaps.

Using the SWM hierarchy, the City of Falls Church staff worked in cooperation with the Solid Waste Management Plan Advisory Committee (SWMPAC) to evaluate current SWM practices, including source reduction and reuse initiatives, recycling activities and programs, future markets for recyclables, collection operations, and transfer facilities. (Since all yard waste generated in the City is required to be recycled, the City did not evaluate disposal). Next, the City reviewed the current and future projections of its solid waste stream quantities over the SWMP planning period. Using these projections, the City assessed the changes in the solid waste stream over the planning period and identified the critical areas requiring modification. Finally, the City selected SWMP actions that will close the gaps between its current SWM system and that required in the future.

### **Overview of the 20-Year Plan for the City's Yard Waste Management System**

The City's current SWM programs and activities for yard waste, the gaps in waste management, and SWMP actions over the SWMP planning period are summarized in Table 8-1. This table is organized by level of

the waste hierarchy, from source reduction and reuse, to recycling, collection, transfer, and disposal. (Note that private companies are responsible for many of the activities in the current and future system.)

*Table 8-1. Yard Waste: Current Waste Management Activities, Anticipated Gaps in Waste Management, and SWMP Actions*

	Current Programs in the City	Anticipated Gaps	SWMP Actions
Source reduction and reuse	<ul style="list-style-type: none"> <li>– Backyard composting and vermicomposting classes</li> </ul>	<ul style="list-style-type: none"> <li>– Increased reliance on City collection and recycling of yard waste rather than source reduction and reuse</li> </ul>	<ul style="list-style-type: none"> <li>– Improve public outreach and education to promote source reduction and reuse</li> <li>– Implement internal source reduction and reuse programs at City government facilities and schools</li> <li>– Provide tools to promote increased source reduction and reuse</li> <li>– Monitor and publicize waste generation</li> </ul>
Recycling	<ul style="list-style-type: none"> <li>– Composting of bagged yard waste outside the City</li> <li>– Grind vacuumed leaves into mulch available for residents</li> <li>– Fairfax County grinds City-generated brush into mulch available for residents</li> </ul>	<ul style="list-style-type: none"> <li>– Regional increases in yard waste quantities may impact capacity of composting facilities for City-generated yard waste</li> </ul>	<ul style="list-style-type: none"> <li>– Improve public outreach and education to promote recycling</li> <li>– Continue current yard waste recycling system; contract with composting facilities for dedicated capacity</li> </ul>
Collection	<ul style="list-style-type: none"> <li>– Residential curbside collection of bagged yard waste and bundled brush</li> <li>– Commercial collection</li> <li>– Citizen disposal facilities at Fairfax County's I-66 Transfer Station</li> <li>– Vacuum leaf collection</li> </ul>	<ul style="list-style-type: none"> <li>– None</li> </ul>	<ul style="list-style-type: none"> <li>– Continue current collection system, including vacuumed leaf collection</li> <li>– Promote use of special fuels, filters, and special vehicles for collection</li> <li>– Implement a collection and disposal strategy for emergencies</li> </ul>
Transfer	<ul style="list-style-type: none"> <li>– City Transfer Yard for vacuumed leaves</li> <li>– Fairfax County's I-66 Transfer Station for all other yard waste (i.e., bagged yard waste and brush)</li> </ul>	<ul style="list-style-type: none"> <li>– Possible loss of City Transfer Yard for leaf storage and processing</li> </ul>	<ul style="list-style-type: none"> <li>– Continue using the current transfer system</li> <li>– Maintain leaf mulch program at the City Transfer Yard or alternative location</li> </ul>
Disposal	<ul style="list-style-type: none"> <li>– All yard waste generated in the City is recycled</li> </ul>	Not Applicable	Not Applicable

## Source Reduction and Reuse

### Current Programs

The City's current source reduction and reuse initiatives for yard waste consist of classes in backyard composting and vermicomposting.

**The City sponsors classes to promote backyard composting and vermicomposting of yard waste.**

In 1991, the City established a Backyard Composting Demonstration Site, currently located in a section of Cavalier Trail Park, near the intersection of S. Maple Avenue and S. Washington Street. The site includes several styles of composting bins and a "classroom" area composed of tree stumps in a circular formation. The area is accessible to the public throughout the year.



City-sponsored classes in backyard composting are held at the site each spring and fall and are directed by the City's Recycling Coordinator and volunteers from the Master Gardener program. The classes are free and open to the public and include basic information on the "whys" and "hows" of successful composting. The classes are publicized through the *Falls Church News-Press*, *The Falls Church*

*Environment* newsletter, and the Falls Church Environment website. Approximately 25 residents take the class each year. In addition, the City has sponsored two vermicomposting workshops to teach citizens the basics of food waste composting using red worms in an enclosed container. Thirty households have participated in these workshops.

### **Assessment of Current and Future Source Reduction and Reuse Needs**

Calculating the quantities of yard waste that are reduced prior to entering the waste stream is problematic. Therefore, the City does not develop source reduction and reuse projections for yard waste.

The City of Falls Church follows the solid waste hierarchy in designing its SWM system. The City prefers source reduction followed by reuse and recycling to disposal of yard waste. The SWM Program goal is to implement new programs that will maximize the volume of yard waste handled by source reduction and reuse over the SWMP planning period.

### **SWMP Actions**

Table 8-2 shows the City's SWMP actions for the source reduction and reuse of yard waste. The City selected SWMP actions based on their alignment with the SWMP goals (in Chapter 4) and their ability to close the gaps between the City's current SWM system and that required in the future. These SWMP actions are discussed in more detail in Chapter 11.

Table 8-2. City of Falls Church Yard Waste Source Reduction and Reuse SWMP Actions

Yard Waste Source Reduction and Reuse SWMP Actions
– Improve public outreach and education to promote source reduction and reuse
– Implement source reduction and reuse programs
– Provide tools to promote increased source reduction and reuse
– Monitor and publicize waste generation

## Recycling

**The City provides three recycling collection options for yard waste: in one's own back yard, at the curb, or at Fairfax County's I-66 Transfer Station.**

### Current Programs

Table 6-3 (in Chapter 6) shows yard waste recycling data for the City of Falls Church from 1999 to 2002. The City requires the recycling of yard debris, including leaves, yard and grass clippings, and brush. The City has provided three recycling options for yard debris: in one's own back yard, at the curb, or at Fairfax County's I-66 Transfer Station.



The City collects vegetative wastes (grass, leaves, brush, yard trimmings) from residents who receive City recycling services. The City requires residents to bag grass clippings and small plant materials in paper bags and affix a collection sticker (50 cents per bag). Bagged yard waste service is provided weekly from January through October.

The City also collects bundled brush and vacuums loose leaves curbside from residents who receive City recycling services. Brush collection is provided every weekly throughout the year, except October 15 through December 15, when vacuum leaf collection occurs.



Brush includes tree branches, large twigs, shrubs, plant trimmings, bamboo, and vines. The City requires branches to be cut in lengths not exceeding five feet, with trunk diameter no greater than six inches. The City provides collection of bundled brush free of charge. Unbundled brush or brush exceeding six inches in diameter requires a special pickup request, with a collection fee of \$65 for every two cubic yards of brush.

The City grinds vacuumed leaves collected in the fall at the City's leaf storage area (Transfer Yard). The City offers the resulting leaf mulch to residents on a self-haul or free delivery basis.

All other yard waste collected in the City of Falls Church is sent to Fairfax County's I-66 Transfer Station. The county sends bagged yard waste to one of two yard composting facilities, Prince William County Compost Facility at Balls Ford Road and Loudoun Composting in Loudoun County. Fairfax County grinds brush into mulch, which is made available at no cost to City and Fairfax County residents.

Table 8-3, below, shows the City's estimates of yard waste recycling from 2000 to 2002. In 2002, the City of Falls Church ground 990 tons of vacuumed leaves and Fairfax County sent 961 tons City-generated yard debris to out-of-county composting facilities and ground 892 tons of City-generated brush.

*Table 8-3. The City of Falls Church Yard Waste Recycling Quantities (2000–2002), tons*

Recycling Method	2000	2001	2002
<b>Vacuumed Leaves Ground into Mulch</b>	<b>1,785</b>	<b>996</b>	<b>990</b>
<b>Yard Waste Sent to I-66 Transfer Station</b>	<b>2,208</b>	<b>1,722</b>	<b>1,631</b>
Yard Debris Sent to Composting Facilities	1,137	862	961
Prince William County Compost Facility	540	513	537
Loudoun Composting	597	350	424
Brush Ground into Mulch	1,071	769	892

### **Assessment of Current and Future Recycling Needs**

Since there are few open areas remaining in the City, future population increases will likely not affect yard waste generation quantities. Therefore, the City projects that yard waste generation quantities will remain at current levels (3,111 tons per year) throughout the SWMP planning period.

Almost all yard waste generated in the City of Falls Church is recycled. As a result, the yard waste generation projections also represent the City's yard waste recycling projections.

Table 8-4 presents the projected quantities of yard waste by recycling method (i.e., yard waste sent to yard waste composting facilities outside the City and vacuumed leaves and brush ground available at City and Fairfax County facilities). These estimates were developed based on the average percentages of City-generated yard waste handled by these methods from 2000 to 2002.

*Table 8-4. Yard Waste Projections By Recycling Method in the City of Falls Church, 2004-2025 (tons)*

Years	Mulched Vacuumed Leaves at City Transfer Yard	Yard Waste Composting	Mulched Brush at I-66 Transfer Station
2004-2025	1,257	961	892

City of Falls Church and Fairfax County facilities have sufficient capacity to mulch the projected quantities of brush and vacuumed leaves. Similarly, the City and Fairfax County expect demand for mulch to be sufficient over the SWMP planning period.

**The City's primary capacity concern for yard waste is the ability of the composting facilities outside the City to handle the increased yard waste quantities.**

The primary capacity concern for yard waste in the City of Falls Church is the ability of composting facilities outside the City to continue to handle City yard waste over the SWMP planning period, especially during catastrophic events such as hurricanes. Increasing yard waste in the region over the next 20 years may exceed the capacity of these facilities.



### SWMP Actions

Table 8-5 shows the City's SWMP actions for yard waste recycling. The City selected SWMP actions based on their alignment with the SWMP goals (in Chapter 4) and their ability to close the gaps between the City's current SWM system and that required in the future. These SWMP actions are discussed in more detail in Chapter 11.

*Table 8-5. City of Falls Church Yard Waste Recycling SWMP Actions*

Yard Waste Recycling SWMP Actions	
–	Improve public outreach and education to promote recycling
–	Continue current yard waste recycling system; contract with composting facilities for dedicated capacity

## Collection

### Current Programs

#### Residential Collection

There are several options that residents have for the collection of yard waste:

- recycling yard debris in their own yards (grasscycling and/or composting),



- setting out grass clippings and small plant materials in paper bags and affixing a collection sticker (50 cents per bag) for City to collect and dispose,
- setting out brush (lengths of 5 feet or less and diameter of 6 inches or less) bundled with twine for City to collect and dispose,
- engaging a landscaping service, who is required to remove and recycle any waste from tree trimming or removal, and
- taking yard debris to the I-66 Transfer Station citizens' disposal areas.



Residents who receive City recycling services also receive City collection of vegetative wastes. Bagged yard waste is collected weekly from January through October. Loose leaves are vacuum-collected from mid-October through mid-December. Bundled brush is collected weekly year-round, except during loose leaf collection season. Unbundled brush requires a collection charge of \$65 for every two cubic yards.

### **Commercial Collection**

Commercial yard waste collection in the City of Falls Church is managed by building owners/operators who contract with privately-owned firms in the City.

### **Assessment of Current and Future Collection Needs**

Since there are few open areas remaining in the City, future population increases will likely not affect yard waste generation quantities. Therefore, the City projects that yard waste generation quantities will remain at current levels (3,111 tons per year) throughout the SWMP planning period. Since all yard waste generated in the City of Falls Church is collected, the yard waste generation projections also represent the City's yard waste collection projections.

### **SWMP Actions**

Table 8-6 shows the City's SWMP actions for the collection of yard waste. The City selected SWMP actions based on their alignment with the SWMP goals (in Chapter 4) and their ability to close the gaps between the City's current SWM system and that required in the future. These SWMP actions are discussed in more detail in Chapter 11.

Table 8-6. City of Falls Church Yard Waste Collection SWMP Actions

Yard Waste Collection SWMP Actions	
–	Continue current collection system, including vacuumed leaf collection
–	Promote use of special fuels, filters, and special vehicles for collection
–	Implement a collection and disposal strategy for emergencies

## Transfer

**The City of Falls Church uses the City Transfer Yard and Fairfax County's I-66 Transfer Station for the transfer of yard waste.**

### Current Programs

The City of Falls Church uses two facilities for the transfer of yard waste: the City of Falls Church Transfer Yard and Fairfax County's I-66 Transfer Station.



#### City Transfer Yard

Following collection of loose leaves in the fall, the City hires a tub-grinding service to process leaves at the City's leaf storage area (City Transfer Yard). The City offers the resulting leaf mulch to residents on a self-haul or free delivery basis.

#### I-66 Transfer Station

The City delivers bagged yard debris and brush to Fairfax County's I-66 Transfer Station (10 miles from Falls Church) for processing. The county tub-grinds brush on-site and allows free pickup of mulch by residents. The county transfers bagged yard trimmings to two out-of-county composting facilities: Prince William County Compost Facility at Balls Ford Road and Loudoun Composting in Loudoun County.



Table 8-7 shows the quantities of City-generated bagged yard waste and brush received at the I-66 Transfer Station.



*Table 8-7. City-Generated Yard Waste Transfer Quantities at Fairfax County's I-66 Transfer Station (2000–2002), tons*

	2000	2001	2002
<b>I-66 Inbound Bagged Yard Waste Brush</b>	2,208	1,722	1,631
<b>I -66 Outbound Yard Waste</b>			
Sent to Out-of-County Composting Facilities	1,137	880	862
Prince William County Compost Facility	540	524	513
Loudoun Composting	597	356	350
Brush Mulch Distributed	1,071	842	769

In 2002, the City estimates that Fairfax County sent 862 tons of City-generated yard debris to composting facilities, the majority (513 tons) to the Prince William County Compost Facility at Balls Ford Road and a smaller amount (350 tons) to Loudoun Composting, a private composting facility in Loudoun County.

Fairfax County grinds City-generated brush delivered to the I-66 Transfer Station; the resulting mulch is made available at no cost to City and Fairfax County residents. In 2002, Fairfax County ground and distributed 769 tons of City-generated brush.

### **Assessment of Current and Future Transfer Needs**

Since there are few open areas remaining in the City, future population increases will likely not affect yard waste generation quantities. Therefore, the City projects that yard waste generation quantities will remain at current levels (3,111 tons per year) throughout the SWMP planning period.

Almost all yard waste generated in the City of Falls Church is managed at one of two transfer stations, the City of Falls Church Transfer Yard and Fairfax County's I-66 Transfer Station. As a result, the yard waste generation projections also represent our yard waste transfer projections.

Table 8-8 presents the projected quantities of yard waste handled at the City Transfer Yard and I-66 Transfer Station over the SWMP planning period. These estimates were developed based on the average quantities of City-generated yard waste handled by these facilities from 2000 to 2002.

*Table 8-8. Future Projections of Yard Waste Handled at City of Falls Church Transfer Yard and Fairfax County I-66 Transfer Station, 2004–2025 (tons)*

Years	City Transfer Yard	I-66 Transfer Station
2004 - 2025	1,257	1,854

The City Transfer Yard and Fairfax County's I-66 Transfer Station transfer facilities have sufficient capacities to handle the projected quantities of yard waste generated over the SWMP planning period.

One concern for the transfer of City-generated yard waste is the availability of the City Transfer Yard over the SWMP planning period. The construction of a new middle school adjacent to the facility may put continued leaf storage and processing operations at the City Transfer Yard at risk.

### **SWMP Actions**

Table 8-9 shows the City's SWMP actions for the transfer of yard waste. The City selected SWMP actions based on their alignment with the SWMP goals (in Chapter 4) and their ability to close the gaps between the City's current SWM system and that required in the future. These SWMP actions are discussed in more detail in Chapter 11.

*Table 8-9. City of Falls Church Yard Waste Transfer SWMP Actions*

Yard Waste Transfer SWMP Actions	
–	Continue using the current transfer system
–	Maintain leaf mulch program at the City Transfer Yard or alternative location